

## SEQUENCE LISTING

<110> Commonwealth Scientific and Industrial Research  
Organisation  
Grains Research and Development Corporation

<120> Antifungal peptides

<130> 501692

<150> AU 2004900938

<151> 2004-02-24

<160> 62

<170> PatentIn version 3.3

<210> 1

<211> 64

<212> PRT

<213> Galleria mellonella

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Met Lys Phe Thr Gly Ile Phe Phe Ile Ile Met Ala Ile Ile Ala Leu  
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Phe Ile Gly Ser Asn Glu Ala Ala Pro Lys Val Asn Val Asn Ala Ile  
20 25 30

Lys Lys Gly Gly Lys Ala Ile Gly Lys Gly Phe Lys Val Ile Ser Ala  
35 40 45

Ala Ser Thr Ala His Asp Val Tyr Glu His Ile Lys Asn Arg Arg His  
50 55 60

<210> 2

<211> 64

<212> PRT

<213> Galleria mellonella

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Phe Ile Gly Ser Asn Glu Ala Ala Pro Lys Val Asn Val Asn Ala Ile  
20 25 30

Lys Lys Gly Gly Lys Ala Ile Gly Lys Gly Phe Lys Val Ile Ser Ala  
35 40 45

Ala Ser Thr Ala His Asp Val Tyr Glu His Ile Lys Asn Arg Arg His  
50 55 60

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<213> Galleria mellonella

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Phe Val Ser Ser Gly Asp Ala Ala Pro Gly Lys Ile Pro Val Lys Ala  
20 25 30

Ile Lys Lys Gly Gly Gln Ile Ile Gly Lys Ala Leu Arg Gly Ile Asn  
35 40 45

Ile Ala Ser Thr Ala His Asp Ile Ile Ser Gln Phe Lys Pro Lys Lys  
50 55 60

Lys Lys Asn His  
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<213> Galleria mellonella

<400> 4

Lys Val Asn Val Asn Ala Ile Lys Lys Gly Gly Lys Ala Ile Gly Lys  
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Gly Phe Lys Val Ile Ser Ala Ala Ser Thr Ala His Asp Val Tyr Glu  
20 25 30

His Ile Lys Asn Arg Arg His  
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<213> Galleria mellonella

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Gly Gly Gln Ile Ile Gly Lys Ala Leu Arg Gly Ile Asn Ile Ala Ser  
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Thr Ala His Asp Ile Ile Ser Gln Phe Lys Pro Lys Lys Lys Lys Asn  
20 25 30

His

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 cctaaagtca atgttaatgc cattaagaag ggaggaaagg ccataggaaa aggattttaa 180  
 gtaatcagtg cggcgagtac agcgcatgac gtctatgaac acattaaaaa cagaaggcac 240  
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 atttaaagta atcagtgcgg cgagtacagc gcatgacgtc tatgaacaca ttaaaaacag 240  
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 gtaaagctct gcgtggaatc aatatagcga gtactgcaca tgacataatt agccagttca 240  
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 aaaggattta aagtaatcag tgcggcgagt acagcgcgatg acgtctatga acacattaaa 180  
 aacagaaggc ac 192

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 aatgaagcgg cgcctaaagt caatgttaat gccattaaga agggaggaaa ggccatagga 120  
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 aacagaaggc ac 192

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 ggtaaagctc tgcgtggaat caatatagcg agtactgcac atgacataat tagccagtgc 180  
 aaaccgaaaa agaagaaaaa ccat 204

<210> 12  
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 <213> *Galleria mellonella*

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 ataattagcc agttcaaacc gaaaaagaag aaaaaccat 99

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 <213> *Spodoptera litura*

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Met Lys Leu Thr Lys Val Phe Val Ile Leu Ile Val Val Val Ala Leu  
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Leu Val Pro Ser Glu Ala Ala Pro Gly Lys Ile Pro Val Lys Ala Ile  
 20 25 30

Lys Lys Ala Gly Ala Ala Ile Gly Lys Gly Leu Arg Ala Ile Asn Ile  
 35 40 45

Ala Ser Thr Ala His Asp Val Tyr Ser Phe Phe Lys Pro Lys His Lys  
 50 55 60

Lys Lys His  
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 <213> *Manduca sexta*

<400> 15

Met Lys Leu Thr Ser Leu Phe Ile Phe Val Ile Val Ala Leu Ser Leu  
 1 5 10 15

Leu Phe Ser Ser Thr Asp Ala Ala Pro Gly Lys Ile Pro Val Lys Ala  
 20 25 30

Ile Lys Gln Ala Gly Lys Val Ile Gly Lys Gly Leu Arg Ala Ile Asn  
 35 40 45

Ile Ala Gly Thr Thr His Asp Val Val Ser Phe Phe Arg Pro Lys Lys  
 50 55 60

Lys Lys His  
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<210> 16  
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<213> Bombyx mori

<400> 16

Met Asn Ile Leu Lys Phe Phe Phe Val Phe Ile Val Ala Met Ser Leu  
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Val Ser Cys Ser Thr Ala Ala Pro Ala Lys Ile Pro Ile Lys Ala Ile  
20 25 30

Lys Thr Val Gly Lys Ala Val Gly Lys Gly Leu Arg Ala Ile Asn Ile  
35 40 45

Ala Ser Thr Ala Asn Asp Val Phe Asn Phe Leu Lys Pro Lys Lys Arg  
50 55 60

Lys His  
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<210> 17  
<211> 41  
<212> PRT  
<213> Heliothis virescens

<400> 17

Gly Lys Ile Pro Ile Gly Ala Ile Lys Lys Ala Gly Lys Ala Ile Gly  
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Lys Gly Leu Arg Ala Val Asn Ile Ala Ser Thr Ala His Asp Val Tyr  
20 25 30

Thr Phe Phe Lys Pro Lys Lys Arg His  
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<210> 18  
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<400> 18

Met Tyr Phe Leu Lys Tyr Phe Ile Val Val Leu Val Ala Leu Ser Leu  
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Met Ile Cys Ser Gly Gln Ala Asp Pro Lys Ile Pro Val Lys Ser Leu  
20 25 30

Lys Lys Gly Gly Lys Val Ile Ala Lys Gly Phe Lys Val Leu Thr Ala  
35 40 45

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Gln Gly  
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<213> Galleria mellonella

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Gly Phe Lys Val Ile Ser Ala Ala Ser Thr Ala His Asp Val Tyr Glu  
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Thr Ala His Asp Ile Ile Ser Gln Phe Lys Pro Lys  
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23

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<223> N = inosine

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<223> N = inosine



<400> 23  
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<210> 24  
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<400> 25  
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<210> 26  
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<400> 26  
actcgccgca ctgattac 18

<210> 27  
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<400> 27  
 ggggggcaga tcattggg 18

<210> 28  
 <211> 19  
 <212> DNA  
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 <223> Oligonucleotide primer

<400> 28  
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<210> 29  
 <211> 337  
 <212> DNA  
 <213> Galleria mellonella

<400> 29  
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 agtcaatgtt aatgccatta agaagggagg aaaggccata ggaaaaggat ttaaagtaat 180  
 cagtgcggcg agtacagcgc atgacgtcta tgaacacatt aaaaacagaa ggactaata 240  
 aaacaaaaaa taattattta ttttataagg taattttaag acatataatg tatgttgcaa 300  
 attattaagt gaaataaaat ataaaatatt ttttggtt 337

<210> 30  
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 <212> PRT  
 <213> Galleria mellonella

<400> 30

Lys Val Pro Ile Gly Ala Ile Lys Lys Gly Gly Lys Ile Ile Lys Lys  
 1 5 10 15

Gly Leu Gly Val Ile Gly Ala Ala Gly Thr Ala His Glu Val Tyr Ser  
 20 25 30

<210> 31  
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<223> N = A, C, G or T

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<400> 33  
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<210> 34  
<211> 20  
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<210> 35  
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<210> 36  
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<210> 37  
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<220>  
<223> Oligonucleotide Primer

<400> 37  
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<210> 38  
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<400> 38  
ggatagtact tcataattat atac 24

<210> 39  
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<223> Oligonucleotide Sequence  
  
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<210> 41  
<211> 35  
<212> DNA  
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<223> Oligonucleotide Primer  
  
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<210> 42  
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<212> DNA  
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<210> 43  
<211> 19  
<212> DNA  
<213> Artificial Sequence

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&lt;223&gt; Oligonucleotide Primer

&lt;400&gt; 43

cgccagagga cccctaaac

19

&lt;210&gt; 44

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Oligonucleotide Primer

&lt;400&gt; 44

atcgatgccga gaaccaagag a

21

&lt;210&gt; 45

&lt;211&gt; 42

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Oligonucleotide Primer

&lt;400&gt; 45

tcgaaggaga tgccaccatg aagtttacag gaatattcctt ca

42

&lt;210&gt; 46

&lt;211&gt; 33

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Oligonucleotide Primer

&lt;400&gt; 46

ttagtgcctt ctgtttttaa tgtgttcata gac

33

&lt;210&gt; 47

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Galleria mellonella

&lt;400&gt; 47

Met	Lys	Leu	Thr	Gly	Leu	Phe	Phe	Met	Ile	Met	Ala	Met	Leu	Ala	Leu
1				5					10					15	

Phe	Val	Gly	Ala	Gly	Gln	Ala	Asp	Pro	Lys	Val	Pro	Ile	Gly	Ala	Ile
		20						25					30		

Lys	Lys	Gly	Gly	Lys	Ile	Ile	Lys	Lys	Gly	Leu	Gly	Val	Ile	Gly	Ala
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Ala Gly Thr Ala His Glu Val Tyr Ser His Val Lys Asn Arg His  
 50 55 60

<210> 48  
 <211> 38  
 <212> PRT  
 <213> Galleria mellonella

<400> 48

Lys Val Pro Ile Gly Ala Ile Lys Lys Gly Gly Lys Ile Ile Lys Lys  
 1 5 10 15

Gly Leu Gly Val Ile Gly Ala Ala Gly Thr Ala His Glu Val Tyr Ser  
 20 25 30

His Val Lys Asn Arg His  
 35

<210> 49  
 <211> 375  
 <212> DNA  
 <213> Galleria mellonella

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 ctgtttgttg gcgctgggtca agccgaccct aagggtgccca ttggcgccat caagaagggt 180  
 ggcaaaatta ttaaaaaagg tcttgggtgta attgggtgccg ctggtacagc gcatgaagta 240  
 tatagccacg tcaagaacag gcattagatt cttgaagaat atatagtata taattatgaa 300  
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 atttatcctc gtgcc 375

<210> 50  
 <211> 192  
 <212> DNA  
 <213> Galleria mellonella

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 aaaggtcttg gtgtaattgg tgccgctggt acagcgcatg aagtatatag ccacgtcaag 180  
 aacaggcatt ag 192

<210> 51  
 <211> 117  
 <212> DNA  
 <213> Galleria mellonella

<400> 51  
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<210> 52  
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 <212> PRT  
 <213> Galleria mellonella

<400> 52  
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 20 25 30  
 Lys Lys Gly Gly Lys Ile Ile Lys Lys Gly Leu Gly Val Leu Gly Ala  
 35 40 45  
 Ala Gly Thr Ala His Glu Val Tyr Asn His Val Arg Asn Arg Gln  
 50 55 60

<210> 53  
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 <212> PRT  
 <213> Galleria mellonella

<400> 53  
 Lys Val Pro Ile Gly Ala Ile Lys Lys Gly Gly Lys Ile Ile Lys Lys  
 1 5 10 15  
 Gly Leu Gly Val Leu Gly Ala Ala Gly Thr Ala His Glu Val Tyr Asn  
 20 25 30  
 His Val Arg Asn Arg Gln  
 35

<210> 54  
 <211> 462  
 <212> DNA  
 <213> Galleria mellonella

<400> 54  
 acttcattgt gtacagttgc aggacttaat acttagtgaa ctacttactc ctcggtacca 60



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accatgaagc tgaccggtct atttctcatg atcatggcgg tgctcgcgct gtttggtggc 120
gctggtcaag ccgaccctaa ggtgcccatt ggcgctatca agaagggcgg caaaattatt 180
aaaaagggtc taggtgtgct tggcgccgcg ggcacagcgc acgaagtgtg caaccacggt 240
aggaacaggc agtaacgtca tgcgtgattg ttgtacatac agtacttaca atacgatttg 300
tcttggtgtg gatatatctt tagataaatt aatttataat accacatact tattagtaaa 360
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<212> DNA
<213> Galleria mellonella

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ggccaagccg accctaaggt gccattggc gctatcaaga agggcggcaa aattattaaa 120
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aacaggcagt aa 192

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<210> 56
<211> 117
<212> DNA
<213> Galleria mellonella

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<210> 57
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<212> PRT
<213> Spodoptera exigua

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<400> 57

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Leu Val Pro Ser Glu Ala Ala Pro Gly Lys Ile Pro Val Lys Ala Ile
20          25          30

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Lys Lys Ala Gly Thr Ala Ile Gly Lys Gly Leu Arg Ala Ile Asn Ile
35          40          45

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Ala Ser Thr Ala His Asp Val Tyr Ser Phe Phe Lys Pro Lys His Lys  
 50 55 60

Lys Lys His  
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<210> 58  
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 <212> PRT  
 <213> Hyblaea puera  
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Ile Lys Ala Ile Lys Thr Val Gly Lys Ala Val Gly Lys Gly Leu Arg  
 20 25 30

Ala Ile Asn Ile Ala Ser Thr Ala Asn Asp Val Phe Asn Phe Leu Lys  
 35 40 45

Pro Lys Lys Arg Lys His  
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<210> 59  
 <211> 41  
 <212> PRT  
 <213> Caligo illioneus  
 <400> 59

Gly Lys Ile Pro Ile Asn Ala Ile Arg Lys Gly Ala Lys Ala Val Gly  
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His Gly Leu Arg Ala Leu Asn Ile Ala Ser Thr Ala His Asp Ile Ala  
 20 25 30

Ser Ala Phe His Arg Lys Arg Lys His  
 35 40

<210> 60  
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 <212> PRT  
 <213> Caligo illioneus  
 <400> 60

Arg Lys Ile Pro Val Glu Ala Ile Lys Lys Gly Ala Ser Arg Ala Trp  
 1 5 10 15

Arg Ala Leu Asp Leu Ala Ser Thr Ala Tyr Asp Ile Ala Ser Ile Phe  
20 25 30

Asn Arg Lys Arg Glu.  
35

<210> 61  
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<400> 61

Gly Lys Ile Pro Val Glu Ala Leu Lys Lys Gly Ala Lys Val Ala Gly  
1 5 10 15

Arg Ala Trp Arg Ala Leu Asp Leu Ala Ser Thr Ala Tyr Asp Ile Ala  
20 25 30

His Leu Phe Asp Arg Lys Arg Asn  
35 40

<210> 62  
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<223> Xaa = ILE, VAL, MET, ALA, PHE or LEU, or more preferably LEU or PHE

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<400> 62

Xaa Lys Xaa Xaa Xaa Xaa Ala Ile Lys Lys Gly Gly Xaa Xaa Ile Xaa  
1 5 10 15

Lys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ala Xaa Thr Ala His Xaa Xaa Xaa  
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
35 40